REMARKS

Claims 1, 3-17, and 19-48 were pending in the present application. Claims 1, 17, and 33 have been amended. Accordingly, claims 1, 3-17, and 19-48 remain pending in the application.

Claims 1-48 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Liencres et al. (U.S. Patent No. 5,434,993) in view of Chandrasekaran et al. (U.S. Patent No. 6,970,872), and in further view of Roy et al. (U.S. Patent No. 6,065,092). Although Applicant respectfully traverses at least portions of this rejection, Applicant has amended the claims to clarify the language. Support for the amendments may be found in Applicant's specification at least at Par. [0194].

Applicant's claim 1 recites a system comprising in pertinent part

> a node including an active device, an interface to an inter-node network, a system memory, and an address network and a data network that is separate from the address network, coupling the active device, the interface, and the system memory;
>
> ...
>
> wherein in response to receiving from the active device an address packet initiating a transaction to gain an access right to a coherency unit, the system memory is configured to send data corresponding to the coherency unit to the active device dependent on memory response information associated with the coherency unit, wherein the memory response information includes information used to derive global access state information for the coherency unit;
>
> wherein if the transaction cannot be satisfied within the node, the system memory is configured to forward a report, which indicates intervention by the interface is needed to service a request corresponding to the address packet, to the interface via the data network using a data packet, wherein in response to the report, the interface is configured to send the additional node a coherency message requesting the access right via the inter-node network. (Emphasis added)

In response to the Examiner's response to arguments on page 2 of the instant Office action, Applicant submits the type of memory matters because of the topology of

the system and the way in which a system memory is connected to the nodes, in contrast to a cache memory that is within a given node and how it is connected. More particularly, Applicant was pointing out to the Examiner that Liencres clearly uses a system memory and a cache memory and shows both in the drawings. It is this system memory that Applicant is referring to, and not a cache memory. It appears the Examiner chose to recharacterize the function and topology of Liencres in an effort to mold it to fit Applicant's claims (which it does not). Applicant understands the Examiner is allowed to interpret claims as broadly as is reasonably possible. However, Applicant believes the Examiner has taken excess liberties in interpreting the claims. Accordingly, Applicant maintains the arguments made in the previous Office action responses.

Nonetheless, the Examiner acknowledges Liencres does not teach "wherein if the transaction cannot be satisfied within the node, the system memory is configured to forward a report corresponding to the address packet to the interface, wherein in response to the report, the interface is configured to send the additional node a coherency message requesting the access right via the inter-node network."

However, the Examiner asserts Chandrasekaran teaches the limitation at col. 6 lines 25-36. The Examiner ***paraphrases*** Chandrasekaran and asserts "When another node writes out data, it sends out a report stating the latest write time for that data. The read data is invalid once its timestamp comes before the latest write time. The node, now having an invalid read data, will have to request the updated data from the additional node. It would have been obvious... to employ optimistic reading of data using write time validity checking so that reads could be employed when another node has exclusive access but hasn't yet written the data." (Emphasis added)

Applicant respectfully disagrees with the Examiner's characterization of Chandrasekaran, and it's application to Applicant's claims. More particularly, Applicant submits the limitations recited in the Applicant's claims do not amount to optimistic reads and validity checking.

Chandrasekaran is directed to optimistic reads and write time validity checking.

Applicant submits Chandrasekaran discloses at col. 2, lines 40-53

> Techniques are provided for obtaining a resource that does not currently reside in a cache of a node. In one aspect of the invention, the techniques include sending a request **for permissio**n to access the resource. Before receiving a response to the request, an operation is initiated to retrieve the resource; then the response to the request is received. After receiving the response, it is determined whether the operation results in a correct version of the resource. The entity that is requesting the resource receives a version of the resource (referred to herein as the "returned resource") in response to the operation. If it is determined that the operation results in the correct version, then, after the returned resource is received, the returned resource is placed in the cache for use.

Chandrasekaran discloses at col. 6, lines 25-36

> In an embodiment using the first type of validity checking, the time that the optimistic read is started is compared to the latest time that the data block was written by any of the other nodes. If the read was started after the last write, the read is valid. This can be determined even before the read is finished, but involves the writing node publishing its write time to the other nodes. A node can publish its write time in any way, such as by broadcasting the write time to the other nodes, by storing the write time and responding to requests from other nodes, or by sending the write time to a lock manager. This type of validity checking is called "write-time" validity checking herein. (Emphasis added)

Chandrasekaran also discloses at col. 8 lines 56-66

> If it is determined in step 250 that the particular block returned in step 240 is not valid, then control passes to step 260. In step 260, the operation to retrieve the particular block from disk or a remote cache is started again, based on permission received in step 230. Because permission has been received in step 230 before performing step 260, the data block received in response to step 260 will be valid. In embodiments in which permission is not received in step 230, such as embodiments in which a message denying permission to access the particular data block is received in step 230, step 260 is delayed until permission is received. (Emphasis added)

From the foregoing, Applicant submits Chandrasekaran is disclosing a way to perform a read of data (i.e.,optimistic) **without waiting for a response to a request for the resource**, and then having a way to validate the result of the optimistic read (i.e., whether the read data is valid). More particularly, Chandrasekaran is using time stamp

validity to determine if the read data is valid. Applicant submits this does not teach the limitations recited in Claim 1. To the contrary, Chandrasekaran is merely disclosing a given node broadcasting or somehow publishing its write time for a write of data. Then some other node does an optimistic read of the data, and if that read occurs earlier in time than the write, the read data would be invalid. The write time may be kept by a lock manager which returns the write validity information. This is not the same as the system memory sending a report in response to receiving an address packet, to the interface which sends a coherency message to another node.

The Examiner is asserting that the report recited by Applicant is the time stamp report of Chandrasekaran. Applicant disagrees. Clearly, the time stamp sent by a node in Chandrasekaran is not sent by the memory, nor is it sent in response to a request for **the data**. It is sent in response to the actual writing of the data, or in response to a request for the resource. Further as disclosed in Chandrasekaran, the message may include "data indicating validity information for an optimistic read. In some embodiments, the validity information includes one or more of the write time, the release time, and an attribute value such as the version number of the data block when last written." This is clearly not indicating intervention by the interface is needed.

Thus, Applicant submits neither Liencres nor Chandrasekaran nor Roy taken either singly or in combination teaches or suggests the combination of features recited in Applicant's claim 1. Accordingly, Applicant submits claim 1, along with its dependent claims patentably distinguishes over Liencres in view of Chandrasekaran in view of Roy for the reasons given above.

Applicant's claims 17 and 33 recite features that are similar to the features recited in claim 1. Thus Applicant submits claims 17 and 33, along with their respective dependent claims, patentably distinguish over Liencres in view of Chandrasekaran in view of Roy for at least the reasons given above.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5181-99901/SJC.

Respectfully submitted,

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